

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A method for manufacturing ceramic hollow fibers from nanoscale powders, ~~characterized in that the method comprising:~~

~~(a) manufacturing a ceramic mass is manufactured, in which~~ by transforming a nanoscale metal oxide, carbide, nitride or sulfide powder ~~is transformed~~ with an oxycarboxylic acid, compounded to ~~a the~~ ceramic mass with at least one solvent and at least one polymeric binder //, //;

~~(b) extruding or spinning the ceramic mass is extruded or spun to hollow fiber blanks~~ //, //; and

~~(c) sintering the blanks are sintered according to conventional methods of sintering.~~

2. (Currently Amended) The method according to claim 1, ~~characterized in that~~ wherein the ceramic mass has a solids content of at least 20 vol%, ~~preferably > 25 vol% and especially > 30 vol%.~~

3. (Currently Amended) The method according to claim 1, ~~characterized in that~~ wherein the nanoscale powder is aluminum oxide, zirconium oxide, yttrium stabilized zirconium oxide, titanium oxide, silicon carbide, tungsten carbide and/or silicon nitride.

4. (Currently Amended) The method according to claim 1, ~~characterized in that~~ wherein the oxycarboxylic acid is preferably trioxadecanoic acid or dioctaheptanoic acid.

5. (Currently Amended) The method according to claim 1, ~~characterized in that~~wherein the solvent is water and/or ethyleneglycol, propyleneglycol, diethyleneglycolmonoethylether, diethyleneglycolmonobutylether, especially a mixture of ethyleneglycol and diethyleneglycolmonobutylether.

6. (Currently Amended) The method according to claim 1, ~~characterized in that~~wherein as polymer binder, a cellulose, methylcellulose, ethylcellulose, polyvinylalcohol, ambergum, a polyacrylate and/or polymethacrylate is utilized.

7. (Currently Amended) The method according to claim 1, ~~characterized in that~~wherein as polymeric binder a at least an acrylate and/or methacrylate is utilized, which is polymerized after the shaping by using a radical starter.

8. (Currently Amended) The method according to claim 1, ~~characterized in that~~wherein the ~~an~~ external diameter of the ceramic hollow fibers is  $< 500 \mu\text{m}$ , ~~preferably  $< 200 \mu\text{m}$~~  and especially  ~~$< 100 \mu\text{m}$~~ .

9. (Currently Amended) The method according to claim 1, ~~characterized in that~~wherein the a extrusion mass is placed in a special container or in a pressure vessel of a ~~conventional~~ spinning device and conveyed through the spinning device between room temperature and  $300^\circ\text{C}$ .

10. (Currently Amended) The method according to claim 1, ~~characterized in that~~wherein the hollow fibers ~~can~~ are

be sintered to densities of  $> 97\%$  of the theoretical density.

11. (Currently Amended) The method according to claim 1, ~~characterized in that~~wherein porous hollow fibers are manufactured ~~whose~~having a pore size, ~~in dependence~~dependent on the sintering conditions (temperature, pressure, time, atmosphere) ~~is and~~ between 0.5 nm and 1000 nm, ~~preferably between 0.5 nm and 200 nm and especially between 0.9 nm and 100 nm.~~

12. (Currently Amended) The method according to claim 11, ~~characterized in that to produce~~further comprising adding porous hollow fibers active carbon ~~is added to the ceramic mass,~~ preferably in an amount from 5 to 20 wt% as a template.

13. (Currently Amended) Ceramic hollow fibers, ~~characterized by~~comprising an external diameter of  $< 500\ \mu\text{m}$ , ~~preferably  $< 200\ \mu\text{m}$ , and especially  $< 100\ \mu\text{m}$ ,~~ containing ~~the~~a reaction product from a nanoscale metal oxide, carbide, nitride or sulfide powder, with an oxycarboxylic acid and at least one polymeric binder.

14. (Currently Amended) The method according to claim 1 further comprising using ~~Use of the ceramic mass according to claim 1 for forming ceramic structures by means of ceramic silk screening and, if necessary in combination with a suitable masking technology, subsequent curing.~~

15. (Currently Amended) The method according to claim 1 further comprising using ~~Use of~~ the ceramic hollow fibers ~~according to claim 13~~ for the manufacture of a web that retains ~~its~~ shape when sintered.

16. (Currently Amended) The method according to claim 1 further comprising using ~~Use of~~ the ceramic hollow fibers ~~according to claim 13~~ for metal, polymer and ceramic matrix reinforcements, for artificial organs, for components in microsystems for optical waveguides, for ceramic membranes, for the solid electrolyte in fuel cells (SOFC), for tissue engineering and for the manufacture of extremely light weight ceramic parts for temperature stressed components like heat shields and brake systems.

17. (Currently Amended) The method according to claim 1 further comprising using ~~Use of~~ the ceramic hollow fibers ~~according to claim 13~~ for the manufacture of solid electrolytes in the high temperature fuel cell (SOFC).

18. (Currently Amended) The method according to claim 14 further comprising using ~~Use of~~ the structures formed by ~~means of~~ ceramic silk screening ~~according to claim 14~~ for insulation coatings, functional coatings, protective coatings for sensors, actuators and displays.